



DEPARTMENT OF THE NAVY  
OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
WASHINGTON 25, D. C.

IN REPLY REFER TO

4 March 1959

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MEMORANDUM FOR ALL FLAG OFFICERS

Subj: Views on Adequacy of U. S. Deterrent/Retaliatory Forces as  
Related to General and Limited War Capabilities.

1. The enclosed views on the adequacy of the United States deterrent/retaliatory forces as related to general and limited war capabilities are furnished for your information.
2. This document should be held closely. It is for your information only.

Best regards,

ARLEIGH BURKE

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VIEWS ON ADEQUACY OF U.S. DETERRENT/RETALIATORY FORCES  
AS RELATED TO GENERAL AND LIMITED WAR CAPABILITIES

Military Posture Must be Responsive to Changing World Conditions

The nation's military posture is based upon requirements which are generated in support of the National Strategy. Strategy is a dynamic art - it has to be responsive to the continuously changing world conditions.

Similarly, military posture must be responsive to changing circumstances. It must undergo constant reevaluation and constant readjustment to new developments on the international political scene as well as to new advancements in the science of war and the technology of weapons.

Developments Requiring Re-examination of Retaliatory Power

There are currently several significant developments which require that a very careful appraisal be made of the future composition of U.S. deterrent/retaliatory forces, and the target system such forces should be designed to hit. These are:

- a. The potential Soviet missile capability versus the vulnerability to surprise attack of U.S. manned bombers and ballistic missiles operated from land bases.
- b. The probability that the precise location of enemy missile launching sites will not be known.
- c. The tremendous costs of strategic weapon systems, and their potential impact upon other vital military requirements and upon a sound national economy.

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d. The decreasing probability of general war in view of the state of mutual intimidation now existing, and the increasing tempo of limited and cold war.

Determination of Proper Amount of Retaliatory Power

The determination of the proper amount of retaliatory power which the United States should have, and where to strike the balance between those forces capable only of mass destruction and those forces useable for limited actions also, is one of the most difficult problems which have ever confronted the President, the Joint Chiefs of Staff and the Services. There is no precise answer.

Stated in very general terms we can say that the United States must have enough retaliatory power to:

- a. Convince the enemy that he cannot gain his objective by starting a general nuclear war against the United States and its Allies, and
- b. Destroy the enemy should he start such a war.

These general terms are susceptible to wide differences of interpretation in determining the capabilities the United States should have.

It is of paramount importance that we have enough power. Since the whole world can have accurate estimates of our military capability, we cannot bluff. We must have ample actual capability to destroy the enemy.

Insofar as the present is concerned, we now have ample retaliatory power to destroy the U.S.S.R. and Communist China in a general nuclear war. Whether we have too much is not the most important point, since this power is already in being and it would be used if there is a general nuclear war.

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It is important to have a thorough understanding of the basic factors which must be considered in order to arrive at sound conclusions as to the amount and kind of retaliatory power required in the future for general nuclear war.

Factors to be Considered in Selection of Optimum Retaliatory Capability

Some of the more important factors to be considered in determining the optimum retaliatory capability are:

1. The types and numbers of enemy installations which should be destroyed to prevent the enemy from conducting the war. How many military targets, how many centers of government control, how many industrial targets does this involve? Should the targets be all military, all industrial, all government centers, or a mix?

2. Our knowledge of the location of enemy installations. Do we know the location of these military installations? Will we know the location of his missile launching sites? Will they be mobile? How difficult is it to conceal a missile launching site? Will we be able to discern between false targets and real targets? Do we know the location of enemy centers of government control and of his industrial installations? On which of the above are we better informed - military installations, or government control and industrial centers?

3. The enemy's capability to strike us. This is a question not only of the enemy's capability in numbers but also of the variety of types of weapon

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systems he might possess. It includes our estimate of his capability in manned bombers, in IRBMs, in ICBMs, in missile submarines and ships.

4. The ability of our retaliatory forces to survive a surprise attack. Is the location of our retaliatory forces known to the enemy? Are all our retaliatory forces located on fixed bases? Can these bases be concealed or hardened? What is the cost of concealing or hardening? Are these forces dependent upon early warning? What is the degree of assurance that effective early warning can be achieved - now and in the future? Can early warning installations themselves be hardened? Can they be spoofed with decoys? What is the effect of adding a concealable weapon such as the POLARIS submarine to our forces?

5. The reaction time of our retaliatory forces after receipt of warning of a surprise attack. What is it for manned bombers - from land bases, from carriers? What is it with liquid fuel missiles, with solid propellant missiles? What is the cost in men and materials to maintain a system on a continuous alert?

6. The capability of our forces to penetrate enemy defenses. What is the extent of these defenses? What is the effectiveness of air defense missiles against high altitude bombers? Against ballistic missiles? What is the effectiveness of low altitude attack against enemy defenses?

7. Numbers and types of weapon systems for retaliation. Is it to our advantage to have several types of weapons systems? What countermeasures problems are created for an enemy faced with several types of attacking

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weapons systems

negating the effect

of the weapon? Is

8. The number  
major Allies will  
of coordinating a  
of weapon system

9. The amount  
Is it useful to coordinate  
against manned  
power? Will the  
effort should be  
in the realm of  
is there even an  
a danger of falling

10. The selection  
be obsolete before  
life (shelf-life)  
a system already  
cancelled? Should  
Should real estate  
have been evaluated

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STATEMENT ON BALLISTIC MISSILES

These days one hears and reads a great deal about "the missile gap". This simple phrase, describing a most complicated problem, is causing much confusion among even well informed people.

Without attempting to predict enemy intentions, an analysis of his probable capacity and production versus our own brings order out of confusion and permits a realistic evaluation of the implications of "the missile gap".

At the outset it should be said that if the missile gap means that a country on a given day, say today, has a numerical advantage in the number of ICBM's available, then the Soviets may lead us. This does not mean, as some would have us believe, that we are faced with imminent catastrophic attack. The diversity striking power and world-wide deployment of our forces, particularly the mobile ones, presents such potential national destruction that even the maddest Russian probably must be deterred.

This does not discount the Soviet threat, either present or that predicted for the future. In the form of the ICBM, the Soviets now possess "an equalizer" which frees them from a secondary position to our long predominant vast nuclear strength. This is most certainly significant. It warrants emphasis and more reliance on forces that possess inherently characteristics of unfettered mobility, long endurance and concealment. But, this threat must be viewed

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not as missile against missile, but in the perspective of the Free World's tremendously diverse total strength.

Let us examine the vastness of the enemy's problem of effecting total surprise. An enemy strike must be coordinated and timed on a world-wide scale. He must destroy enough U.S. and NATO forces in his initial blow to insure that those surviving are incapable of penetrating his defenses to deliver what he considers unacceptable damage.

Even Mr. Lodge was not told what Mr. Khrushchev believes to be unacceptable damage. Much is made by some of the millions of casualties the Russians endured in WW II. Those who use that experience as a measure forget that those casualties did not occur within a few hours - but over a period of many, many months. Consideration of the shock effect that millions of simultaneous fatalities, not to mention the attendant casualties would have on the population of any country leads to the conclusion that not even the Kremlin would deliberately invite destruction of a single 500 kiloton warhead over Moscow, or anywhere else in the homeland let alone a couple of hundred over selected targets. The Soviet leaders have striven too hard to industrialize Russia during our generation to risk its devastation. But, in today's environment some people would have us believe 500 kilotons is a small yield. Multiply it by five, ten or whatever you wish, but always compare it with the bomb dropped on Hiroshima which was only of 13 kiloton yield. (Current estimate - Nobody really knows what it was but the estimates vary between 13 and 18.5 kilotons).



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Now recall the globe girdling disposition of our forces, SAC bases sited from Okinawa to North Africa, carrier strike forces ranging the millions of square miles of ocean from the Western Pacific to the Eastern Atlantic, SACEUR's tactical air and IRBM installations scattered about Western Europe - and the rapidly approaching most significant, assured contribution to be made by POLARIS submarines. A portion of the relatively slow reacting liquid fueled ICBM's and a portion of the SAC and TAC aircraft on the ground and ships in port might be surprised. It's highly improbable though that the Soviets have, or will have soon, the capabilities to surprise and destroy simultaneously enough of our forces to warrant their risking the most severe damage to their people and country. Further, to catch even a portion of our forces by surprise, the Soviets would have to have lulled us to a state of relaxation by a prolonged period of relaxed international tensions. As you know, during periods of international tension, up to 80% of our ships are deployed, SAC increases the rate of sorties and other forces are alerted for fast reaction.

The foregoing does not imply that we can rest on our oars; that we will be safe and secure forever and ever, or that this is an argument for the status quo. Far from it. As the number and performance of ICBM's and POLARIS type missiles available to the Soviets improve and electronic circuits become increasingly reliable, our situation, in fact, the world situation, can become precarious unless we take

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certain steps now. For example, with a system CEP of little over one-half mile a successful ICBM with a yield of about 6.5 MT would have a 90% single shot probability of destroying a missile site hardened to withstand 100 psi overpressure. With technology advancing so swiftly, the achievement of such a CEP could possibly be on the immediate horizon. Although it is very difficult to estimate when such a capability might be available operationally to Russia, it is obvious that it is just a matter of time. Therefore, there is little one can do economically to insure a reasonable degree of permanence in the survivability of anything which is fixed with its position known in advance. Unfortunately, the Iron Curtain and effective security control in Russia prevents us from having such advance information of their missile sites. Reconnaissance satellites may help. But they will not be able to locate Russian missile launching submarines or all fixed missile sites which are either hidden or camouflaged, let alone keep permanent track of fully mobile forces of long endurance, which are relatively base independent.

As mentioned earlier, this means that emphasis and more reliance must be put on forces which are fully mobile - not merely movable - of long endurance, and, if possible, capable of being concealed. Only by so doing can we continue reasonably to expect to provide an enemy with a surprise attack timing and coordination problem of the present, almost insurmountable, proportions.

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War gaming is a useful tool for conducting an analysis of this kind. War gaming, however, has become to many persons an end in itself. It must be remembered that the results of a given war game are predicated entirely on the assumptions for that game. In each war game the original assumptions must be scrutinized carefully, and if they are, they can give you a feel - nothing more - for a particular set of conditions. War gaming per se does not provide unequivocal solutions to the problems of national strategy.

We are continually using war gaming and other tools to shed light on and assist us in resolving the interplay of the many factors pertaining to the problems of national strategy. There are no simple solutions and there is no substitute for the application of informed judgment by knowledgeable men. Within this context, our present situation is far from catastrophic as many pundits would have us believe. We have and will continue to have tremendous diverse power, some of it mobile, widely dispersed over the world.

We must not overestimate Soviet capabilities and underestimate our own. On the other hand, poor evaluations in the opposite direction might invite a catastrophic attack on the United States. To avoid such total disaster, and we can, we must anticipate probable future enemy capabilities and our very long lead times for the development and operational introduction of today's,

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and the future's, complex weapons. The time is upon us when emphasis and more reliance must be placed on systems having unfettered mobility, long endurance and, if possible, capability for concealment.

We cannot afford to give a potential aggressor even a rash gambler's odds by being finessed into a position wherein national survival may depend upon a hair trigger response to a few minutes warning.